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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,926	02/14/2002	David Willming	01-873	1692

7590

09/28/2005

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EXAMINER

CHAI, LONGBIT

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,926

Applicant(s)

WILLMING ET AL.

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/7/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Applicant's claim for benefit of Continuing Application priority date under 35 U.S.C. 120 is acknowledged.

The application is filed on 2/14/2002 but is a Continuation-In-Part of Application number 09/722,095 filed on 1/26/2001.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 8 – 15, 19, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hind (Patent Number: 6823454), in view of Rowney (Patent Number: 5996076).

As per claim 1, Hind teaches a method for automatic installation of a digital certificate on a network device in a data-over-cable system, the method comprising:

determining whether a digital certificate is installed on the network device (Hind: Column 14 Line 1 – 3); if not, generating a digital certificate filename on the network device (Hind: Column 13 Line 58 – 64). Hind teaches downloading the device certificate from the server device to client device (Hind: Column 13 Line 58 – 64); however, Hind does not disclose generating a digital certificate filename on the network device for downloading purpose.

Rowney teaches generating a digital certificate filename on the network device (Rowney: Column 163 Line 22 – 26).

sending a digital certificate request including the digital certificate filename to a predetermined network server; receiving a digital certificate file including at least one digital certificate from the network server; and storing the at least one digital certificate received from the network server on the network device (Rowney: Column 154 Line 62 – 65 and Column 163 Line 22 – 24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Rowney within the system of Hind because Rowney teaches a secure and flexible certificate delivery and installation method over a public communication system, such as internet (Rowney: Column 154 Line 62 – 65, Column 163 Line 22 – 24 and Column 4 Line 1 – 4).

As per claim 2 and 15, Hind as modified teaches having stored therein instructions for causing a processor to execute the method of claim 1 (Hind: Figure 1A).

As per claim 8, Hind as modified teaches obtaining a globally routable network address on the network device prior to sending the digital certificate request to the network server (Hind: Column 13 Line 29 – 40: the Domain Name Server DNS/DHCP system assures that both the server and client (i.e. server device and client device) must use a globally routable network address (i.e. global IP address) in order to access the network entities on external networks); and employing the globally routable network address for sending the digital certificate request to the network server (Hind: Column 13 Line 29 – 40: the request / response are exchanges with standard global IP protocol messages).

As per claim 9, Hind as modified teaches retrieving network address information from at least one data packet sent from at least one customer entity (Hind: Column 2 Line 63: masquerading attack as disclosed by Hind is a way to retrieve network address information from at least one data packet sent from at least one customer entity); and obtaining a physical address of a network gateway associated with the at least one customer entity (Hind: Column 2 Line 21 – 48: the MAC address (besides the IP address) of the router / gateway is needed for the routing protocol before the messages can be successfully routed over the networks via network router located on its own network segment (or subnet)).

As per claim 10, Hind as modified teaches the network address information comprises on Internet Protocol address and a Medium Access Control address

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associated with the customer entity (Hind: Column 2 Line 16 – 67: both Internet Protocol address and a Medium Access Control address are required for standard IP network protocol).

As per claim 11, Hind as modified teaches validating the at least one digital certificate received from the network server prior to storing the at least one digital certificate on the network device (Hind: Column 14 Line 12 – 14).

As per claim 12, Hind as modified teaches the at least one digital certificate comprises a device digital certificate (Hind: Column 13 Line 13 – 14).

As per claim 13, Hind as modified teaches the at least one digital certificate further comprises a network device manufacturer digital certificate (Hind: Column 14 Line 2).

As per claim 14 and 21, claim 14 and 21 do not further teach over claim 1. Therefore, see same rationale addressed above in rejecting claim 1.

As per claim 19, Hind as modified teaches the at least one digital certificate for the network device is generated on the network server (Hind: Column 13 Line 58 – 64).

As per claim 23, Hind as modified teaches wherein the network server's address is installed on the network device prior to requesting, the digital certificate from the predetermined network server (Hind: Column 1 Line 40 – 42: constant IP address).

As per claim 24, Hind as modified teaches the network device is further arranged to install the digital certificate in a memory unit upon receiving the digital certificate from the network server (Hind: Column 13 Line 58 – 64).

3. Claims 3 – 7, 16, 18, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hind (Patent Number: 6823454), in view of Rowney (Patent Number: 5996076), in view of Loukianov (Patent Number: 6715075).

As per claim 3, 18 and 22, Hind as modified does not disclose the network device comprises a cable modem, and the network server comprises a Trivial File Transfer Protocol server.

Loukianov teaches the network device comprises a cable modem, and the network server comprises a Trivial File Transfer Protocol server (Loukianov: Column 1 Line 65 – 67, Column 2 Line 11 – 22 and Column 3 Line 45 – 55).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Loukianov within the system of Hind as modified because (a) Hind teaches device certificate authentication mechanism and (b)

Loukianov teaches providing a secure device certificate method for cable modem systems by using a hash signature (Loukianov: 2 Line 11 – 22).

As per claim 4 and 25, Hind as modified teaches the digital certificate comprises an X.509 security digital certificate (Loukianov: Column 3 Line 54 – 55). Same rationale of combination applies here as above in rejecting the claim 3.

As per claim 5 and 16, Hind teaches a device ID is included in the device certificate (Hind: Column 3 Line 60 – 61). However, Hind does not disclose expressly a digital certificate filename comprises using a type of the network device, a physical address of the network device and an authentication data string.

Loukianov teaches a digital certificate filename comprises using a type of the network device, a physical address of the network device and an authentication data string (Loukianov: Column 2 Line 50 – 54 and Column 2 Line 19 – 20; Hind: Column 3 Line 60 – 61: Examiner notes a certificate filename is used to uniquely identify a device certificate and thereby certificate ID is equivalent to a certificate filename. Device certificate ID includes a device ID (Hind: Column 3 Line 60 – 61) and, besides, the cable modem device can also uniquely identified by MAC address and a certificate can be uniquely identified by certificate hash value as taught by Loukianov (Loukianov: Column 2 Line 50 – 54 and Column 2 Line 19 – 20). Therefore, a digital certificate filename comprises using a type of the network device, a physical address of the network device and an authentication data string).

Same rationale of combination applies here as above in rejecting the claim 3.

As per claim 6, Hind as modified teaches the authentication data string is generated on the network device by applying a hash function to at least one configuration setting associated with the network device (Loukianov: Column 2 Line 19 – 20).

As per claim 7, Hind as modified teaches the at least one configuration setting comprises a MAC address, a serial number or a secret string (Loukianov: Column 2 Line 19 – 20).

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hind (Patent Number: 6823454), in view of Rowney (Patent Number: 5996076), and in view of Kent (Patent Number: 6671804).

As per claim 20, Hind as modified does not disclose expressly requesting a digital certificate from a second network server upon receiving the digital certificate request from the network device; and receiving the digital certificate on the network server from the second network server, wherein the second network server comprises a certificate authority server.

Kent teaches requesting a digital certificate from a second network server upon receiving the digital certificate request from the network device; and receiving the digital

certificate on the network server from the second network server, wherein the second network server comprises a certificate authority server (Kent: Figure 1 Element 110/120/130 and Column 4 Line 27 – 30).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Kent within the system of Hind as modified because (a) Hind teaches device certificate authentication mechanism and (b) Kent teaches providing a enhanced secure validation mechanisms by verifying the certificate requests information from a plurality of requesters (Kent: Column 2 Line 59 – 63, Column 10 Line 9 – 40).

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hind (Patent Number: 6823454), in view of Rowney (Patent Number: 5996076), in view of Loukianov (Patent Number: 6715075), and in view of Kent (Patent Number: 6671804).

As per claim 17, Hind as modified does not disclose generating an authentication data string on the network server; and comparing the authentication string generated on the network server with the authentication data string specified in the received digital certificate filename.

Kent teaches generating an authentication data string on the network server; and comparing the authentication string generated on the network server with the authentication data string specified in the received digital certificate filename (Kent: Column 10 Line 9 – 40: the authentication string is the public key of the requester).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Kent within the system of Hind as modified because (a) Hind teaches device certificate authentication mechanism and (b) Kent teaches providing a enhanced secure validation mechanisms by verifying the certificate requests information from a plurality of requesters (Kent: Column 2 Line 59 – 63, Column 10 Line 9 – 40).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LBC

Longbit Chai
Examiner
Art Unit 2131


Primary Examiner
AU 2131
9/23/05